

ABSTRACT OF THE DISCLOSURE

A method for determining the rotational position of a motor drive shaft includes counting detected ripples contained in a motor current signal as the shaft is driven. Whether a ripple expected to be contained in the current signal at a probable time is absent from within a tolerance band containing the probable time of the expected current ripple is determined. If the expected ripple is absent from within the tolerance band containing the probable time, then whether a ripple is detected after the tolerance band of the expected ripple is determined. If a ripple is detected after the tolerance band and the expected ripple is absent from within the tolerance band, then the expected ripple is counted as a detected ripple. The determined rotational position of the shaft is based on the counted ripples. The length of the tolerance band dynamically changes as a function of a motor operating state.